

IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1.(Currently Amended) A method for removing contaminant particles produced by a radiation source during generation of short-wave radiation having a wavelength of up to approximately 20 nm for illuminating an object, the method comprising the act of:

guiding between the radiation source and the particle trap a first gas at a first side of a particle trap arranged across an opening in a wall of a chamber ~~between the radiation source and the particle trap~~;

introducing a second gas into the chamber at a second side of the particle trap, wherein the first side is different from the second side and the object receives the short-wave radiation from the second side; and

adjusting a pressure of the second gas to be at least as high as a pressure of the first gas so that the second gas flows from the second side to the first side, wherein the second gas is different from the first gas and the second side does not include the first gas.

2.(Previously Presented) The method according to claim 1, wherein the adjusting act adjusts the pressure of the second gas to be higher than the pressure of the first gas.

3.(Currently Amended) The method according to claim 1, wherein the guiding act guides the first gas transversely to a propagation direction of the radiation in a channel that is located at the first side and is at least partially laterally bounded for transporting the contaminant particles to a one side of the channel, and wherein the adjusting act causes the second gas to enter the channel and flow with the first gas for transporting the contaminant particles to the one side of the channel.

4.(Previously Presented) The method according to claim 1, wherein the first gas comprises a noble gas having an atomic weight of at least 39 g/mol.

5.(Previously Presented) The method according to claim 1, wherein the second gas comprises a substance that is substantially transparent for the radiation, the second gas including helium or hydrogen.

6.(Previously Presented) The method according to claim 1, further comprising the act of adjusting a flow velocity of the first gas and/or of the second gas.

7.(Currently Amended) A device for removing contaminant particles produced by a radiation source during generation of short-wave radiation having a wavelength of up to approximately 20 nm for illuminating an object, comprising:

a chamber configured to receive a device to be protected against soiling with the contaminant particles;

a particle trap arranged across an opening in a wall of the chamber, wherein a first gas is guidable at a first side of the particle trap between the radiation source and the particle trap; and wherein a second gas is introducible into the chamber at a second side of the particle trap, wherein the first side is different from the second side and the object receives the short-wave radiation from the second side; and

an adjustor configured to adjust a pressure of the second gas at the second side of the particle trap to be at least as high as a pressure of the first gas at the first side of the particle trap so that the second gas flows from the second side to the first side, wherein the second gas is different from the first gas and the second side does not include the first gas.

8.(Previously Presented) The device according to claim 7, wherein the adjustor is further configured to adjust the pressure of the second gas to be higher than the pressure of the first gas.

9.(Previously Presented) The device according to claim 7, further comprising a

channel for guiding the first gas transversely to the propagation direction of the radiation, wherein the channel is at least partially laterally bounded.

10.(Previously Presented) The device according to claim 7, wherein the first gas comprises a noble gas having an atomic weight of at least 39 g/mol.

11.(Previously Presented) The device according to claim 7, wherein the second gas comprises a substance that is essentially transparent for the radiation, the second gas including helium or hydrogen.

12.(Previously Presented) The device according to claim 7, wherein a flow velocity of the first gas and/or of the second gas is adjustable by means of appropriate devices.

13.(Previously Presented) A lithographic projection apparatus comprising a device according to claim 7.

14.(Previously Presented) The use of the method according to claim 1, for generating radiation in a wavelength range of approximately 2 nm up to approximately 20 nm for a lithography device.

15.(Previously Presented) The use of the method according to claim 1, for generating radiation in a wavelength range of approximately 2 nm up to approximately 20 nm for a microscope.

16.(Previously Presented) The method of claim 1, wherein the act of introducing the second gas prevents the first gas from flowing through the particle trap from the first side to the second side.

17.(Previously Presented) The method of claim 1, further comprising the act of introducing the first gas from a first source at the first side of the particle trap, wherein the act of introducing the second gas introduces the second gas from a second source at the second side of the particle trap.

18.(Previously Presented) The device of claim 7, wherein the second gas prevents the first gas from flowing through the particle trap from the first side to the second side.

19.(Previously Presented) The device of claim 7, further comprising:  
a first source at the first side of the particle trap for introducing the first gas at the first side of the particle trap; and  
a second source at the second side of the particle trap for introducing the second

gas at the second side of the particle trap.

20.(New) The device according to claim 9, wherein the channel is located at the first side, wherein the first gas flows in the channel for transporting the contaminant particles to a one side of the channel, and wherein the adjustor is configured to cause the second gas to enter the channel and flow with the first gas for transporting the contaminant particles to the one side of the channel.